

A Research Investigation to Assess the AWARD Reading Program's Effectiveness in Developing Literacy Achievement for Kindergarten to Grade 2 Students

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In material discussing it, AWARD Reading is described as “a K-3 literacy program that fully integrates technology and print to accelerate reading achievement for all students.” In the schools where the program has been utilized, reports show that it has been popular with both students and teachers. While many factors could be cited as being responsible for the positive response to AWARD Reading, two aspects of the program stand out.

First, AWARD's blending of technology and print has been consistently cited as a strong dimension of the program. This integration creates a high level of interest with students as they engage in technology-based literacy activities. The high level of interest carries over into print instructional experiences, small-group learning, and independent literacy activities.

Second, scaffolded skills instruction provides a clear and sound framework upon which literacy development can occur within students. AWARD's programmatic content parallels the literacy standards established in many states for children in Kindergarten through Grade 3. Additionally, the program uses a sound instructional approach in which children not only learn

crucial literacy skills but also have ample and diverse opportunities to apply and practice these skills so that they can later independently engage them.

While popularity with students and teachers is certainly a desired attribute, there is an even more important criterion upon which to judge a literacy program. It is: to what degree does the program develop achievement in literacy on the part of students regardless of their ethnicity and/or socio-economic status?

Research Hypotheses

With the aforementioned question in mind, a research investigation was conducted to measure the growth in literacy of K-2 students who were taught in classrooms that utilized the AWARD Program. Their performance was measured against comparable students who did not receive literacy instruction via this program.

The objectives of this research investigation were to answer the following questions:

1. Will the AWARD Reading Program deliver significantly higher outcomes for students who are enrolled in Title I, low socio-economic urban schools than for those students in the same school who learn through traditional basal reading programs?
2. Will English Language Learners (ELLs) in the same schools as stated in Hypothesis 1 advance more rapidly in learning to read English through the AWARD Reading program than their counterparts who are instructed through the use of push-in, pull-out, after-school, during school hours, or remedial programs in which traditional ELL reading programs are used?
3. If AWARD Reading does significantly increase literacy achievement for low socio-economic, Title I students and/or ELL populations, is there a method of using this program that is more conducive to attaining high literacy achievement on the part of either or both of these populations? Is a pull-in, push-out, regular classroom use, or after-school application of AWARD Reading most successful for students who do and do not struggle as beginning readers?

Rationale for Research Hypotheses

The three preceding hypotheses were developed because of their consonance with important research that has been conducted relative to learning styles and performance of contemporary urban students. Some of the most pertinent of these investigations include the studies that will be subsequently presented.

In 2008, American education experienced a dramatic, demographic shift, and it has forever altered literacy program and literacy teachers' responsibilities. For the first time in history, the vast majority of USA students attend mostly low socio-economically based, urban schools (Florida, 2008). Many of these children are also being raised by parents who themselves have difficulty reading and writing English (ACT, 2008), and will have had fewer first-hand experiences with concepts and objects that exist within 15 miles of their homes than did prior generations (Carlo, August, McLaughlin, et. al., 2004; Damon, 2008).

Urban students will also have had more virtual, non-word-based than printed-based experiences (Hart & Risley, 1995). They will also have learned significantly fewer words, including subtle and specific one-syllable nouns, such as *mare*, *gale*, and *elm* before they begin school than peers raised in suburban areas (White, Graves & Slater, 1990). They may have also suffered from reduced brain development, problem-solving abilities, reasoning, and creativity because of having had fewer books in their homes, less reading time, and fewer game-based experiences than more affluent students (Knight, in press).

Because of these dramatic changes, new literacy programs must be created to respond positively to these needs. Once low socio-economically based, ELL and urban students enter kindergarten, their deficits will increase unless these differences in their literacy development are addressed. Programs must be developed which take into account the capacity for acquiring competency in literacy between urban and suburban youth. When such programs are not utilized, these differences will escalate throughout their school years. For instance, most urban students who hear an unfamiliar word being read by their teachers will find it more difficult than suburban students to: (a) try to figure out that word's meaning while continuing to comprehend the story, (b) use context clues to deduce the meaning of this unknown word, or (c) ask their teachers to stop reading and explain its meaning (Biemiller, 2006).

Moreover, past reading instruction has not significantly increased urban students' oral, listening, reading, or writing vocabularies because many of these methods relied upon these pupils having had vast experiences with printed words through wide reading which they have not had (Berne & Blachowicz, 2008; Block & Mangieri, 2007; Morrison, Williams, & Massetti, 1998; Nagy & Scott, 2000; Ryder & Graves, 1994). For instance, urban students (performing at the lowest reading quartile) who received three years of present basal-driven lessons exhibited the same reading levels as the highest quartile of students in higher socio-economic schools who were three years younger. Also, after experiencing three years of traditional literacy programs, the lowest performing urban students only increased their reading abilities by one to three months' growth from their starting literacy achievement levels (Biemiller, 2006). Further, one reason that 30-50% of today's urban youth drop out of high school is because they have not been the recipients of effective reading instruction (Greene & Winters, 2006).

The data derived from the investigation described in this report is also needed to provide researchers and practitioners with important information as to how to unlock the complex relationship that exists between urban youth's vocabulary, comprehension, and independent reading abilities. For example, past forms of vocabulary instruction (i.e., 1970-2003) have not consistently led to significant increases in students' comprehension (Baumann, 2008). These methods might have (a) taken too much time away from actual reading, (b) allocated too little time to vocabulary strategy instruction, or (c) taught strategies that were not powerful enough to transfer to comprehension growth.

The research reported in this document was conducted to respond to all of these previous cited needs. More effective reading instruction and programs are needed for urban and ELL youth. As Biemiller (2006) found, such instruction is rare. Better reading lessons have been hypothesized to be one of the best methods of increasing urban youth's subsequent reading abilities, equitable access to post-secondary educational opportunities, and future success in and out of school (Block & Mangieri, 2009; Snow, Burns & Griffin, 1998; RAND, 2002).

Procedures

During the 2008-2009 school year, a scientifically validated research study was conducted following a quasi-experimental, quantitative control versus experimental design. During this year-long study,

Kindergarten, Grade 1, and Grade 2 students and teachers in four New York City Schools were randomly assigned to intervention (AWARD Reading Programs) or non-intervention, traditional reading treatments which used the basal reading programs approved for use by New York City Schools.

Prior to beginning the study, approval to conduct this research investigation was given by Dr. Thomas Gold, Director of External Research for the New York City Department of Education. Following this approval, the schools in this study were identified and an explanation of the AWARD Program was provided to the school's principal, the literacy facilitator, and teachers. Materials were shipped to the randomly assigned classrooms that were to utilize AWARD Reading in this research investigation, and subsequent meetings were held to train the teachers relative to the program's implementation. This training lasted for a total of 20 hours, and support was provided as needed throughout the duration of this research investigation.

The researchers visited each site to assure the standardization of research processes for both the experimental and control groups. Visitations to these schools were also made to ensure that the AWARD Program was being properly utilized in the experimental classrooms.

As a result of the aforementioned actions, experimental and control teachers taught literacy for the same amount of time each day. Both groups of experimental and control teachers were told that the administrators in their schools would be observing their classrooms to ensure that the same daily amounts of literacy instruction were occurring in control and experimental classrooms, and to assure that the materials were being used as prescribed by the authors of the program. These actions were taken to ascertain that the implementation of the study would meet research validity standards.

The experimental and control classrooms taught the interventions or control treatments every day for the entire school year. Students in both the control and experimental groups were also given a comprehensive battery of literacy assessments. These same instruments were given to them at the conclusion of this investigation. It should be noted that these assessments were measures that were already utilized as a part of the New York City Department of Education evaluative process for literacy. These assessments were: EClas, MClas and Teachers' College Evaluations. These assessments included the following subtests: *Rhyme Recognition and Generation*, *Letter Recognition*, *Vocabulary Development*, *Listening Comprehension*, and *Independent Reading Levels*, as measured by DIBELS. Independent Reading level is a reading record in which the percent of students' correctly

answered questions are computed as well as the total number of self-corrections that a student makes while reading orally. These tests are administered individually. DIBELS is the most frequently used assessment measure in Kindergarten and First Grade classrooms in the United States of America.

Subjects

This study involved 1,068 students enrolled in these four, intercity, Title I schools. Each school served low socio-economic students. School 1 contained 133 students with 64 females and 69 males, with all but 20 of these students speaking English as their first language. Twenty students in School 1 were enrolled in English Language Learning classrooms. Students in all schools were randomly assigned to control and experimental groups. Only subjects who had pre and post test data were included in the data analysis. The number of students in School 1 included in the analyses was 133, with 66 assigned to the control group and 67 to the experimental group. For the experimental subjects, AWARD Reading was utilized at this school as a push-in instructional model. By “push-in”, it is meant that two conditions occurred: (1) ELLs received literacy instruction with their non-ELL classmates; and, (2) AWARD Reading was the primary vehicle through which literacy instruction was offered to these students. In this school, control subjects received instruction for the same amount of time as experimental subjects, with a traditional basal reading program that also utilized the push-in instructional model. Six classrooms participated (two kindergarten, two first, and two second grade classrooms). Of these six classrooms, one classroom at each grade level received the treatment while its respective counterpart served as a control classroom.

School 2 contained 76 students of which 23 were female and 53 were male. Students in School 2 were divided between controlled and experimental classrooms with 35 students being assigned to control classrooms and 41 assigned to experimental. All students were ELL. At this school, for experimental subjects, AWARD Reading was utilized for the experimental group while the control group received customary literacy instruction, using the basal reader. The aforementioned took place twice a week as an after-school program for approximately 40 minutes in each instance. Four classrooms participated (two kindergarten, and two first grade classrooms). Of these four classrooms, one classroom at each grade level received the treatment while its counterpart served as a control classroom.

School 3 contained 330 subjects with 169 being females and 161 being males. All of these subjects were enrolled in Special Programs such as Special Education, Language Delay, or Learning

Disabilities. School 3 subjects were assigned to control (N=160) and experimental (N=170) classrooms. At this school, for experimental subjects, AWARD Reading was utilized as a supplemental program. By “supplemental”, it is meant that every day the program was utilized for 40 minutes in conjunction with traditional basal reading instruction. In this school, control subjects received instruction for the same amount of time as experimental subjects, with a traditional basal reading program being used for 40 minutes each day during the time that AWARD was used as the supplemental program. Twelve classrooms participated (four kindergarten, four first, and four second grade classrooms). Of these twelve classrooms, two classrooms at each grade level received the treatment while its counterparts served as control classrooms.

School 4 contained 503 subjects of which 210 were female and 293 were male. Of this total, 250 were experimental and 253 were control group students. At this school, AWARD Reading was utilized for experimental subjects as a pull-out instructional program. By “pull-out”, it is meant that experimental students received AWARD Reading instruction outside the confines of their regular classrooms. In this school, control subjects received instruction for the same amount of time as experimental subjects, also outside of the confines of their regular classroom, but with a traditional basal reading program being used to provide instruction to them. Twenty classrooms participated (ten kindergarten, and ten first grade classrooms). Of these 20 classrooms, five classrooms at each grade level received the treatment while its counterparts served as control classrooms.

Experimental Intervention Treatment

The AWARD Reading Program was utilized for the treatment of all experimental subjects in this research investigation. Five beginning reading skills contained in this integrative technology and text-based program were examined in this research study. These beginning reading skills were:

- Letter Recognition;
- Rhyme Recognition and Generation;
- Vocabulary Development;
- Independent Reading Level; and,
- Listening Comprehension.

AWARD Reading is a comprehensive, balanced literacy core curriculum program that integrates printed books and interactive technology for Kindergarten – Grade 3 students. It was

developed over a five-year period by internationally recognized literacy experts. AWARD incorporates the five essential components of *Reading First*. These five essential domains of reading ability were validated by the National Reading Panel Report (NICHD, 2000) as necessary for literacy success. AWARD contains a scope and sequence that has been aligned with state and national standards in the United States of America.

This year-long program for each grade level is a result of scientific, evidenced-based best practices and data obtained from focus group testing with educators and administrators across the United States. The program contains sequential, weekly lesson plans and suggestions for instruction and independent literacy activities for whole group, small group, and independent individual student practice, especially designed for urban and ELL populations. The research investigation described in this document was designed to determine if the benefits of this program could be realized after only one year of use.

The program contains both narrative and informational texts. Computer-based interactive technology is used to extend the ideas in each text through animation. Students are using some technology with text every day. These essential instructional principles in the print and technology components emphasize the following scientifically based procedures in every lesson:

- Systematic phonics instruction
- Sequential learning
- Explicit instruction
- Differentiated instructional options
- Immediate feedback tools for reporting progress to parents and students
- Objective-based skills assessment
- Teacher observations and student behavioral checklists
- Benchmark print and electronic texts for guided reading placement/assessment
- Lessons reflecting best literacy practices
- Research based-instruction that has proven to increase literacy in classrooms in English-speaking nations.

Data Collection

After all pre and post-tests were completed, all tests were scored by New York City School personnel and shipped to the researchers. Upon receipt of those tests, all data were entered by the same person to ensure consistency in data entry procedures. Intervention and control group scores were entered into a SPSS database and analyzed through ANCOVA or Chi Square statistics, with intervention versus control group variables being the dependent measure. Data were also analyzed by a statistician independent of the investigation for both the control and experimental groups. The same individual also conducted statistical comparisons between ELL and non-ELL sub-groups within the total student population which constituted the research investigation. These analyses enabled researchers to identify the effects of treatments on English-speaking as well as English Language Learners for both experimental and control group students. Data were also analyzed to determine the effects of treatments on gender variables.

Data Analyses

Pre-test and post-test results were analyzed for all subjects who were a part of either the experimental or control groups. Analyses were based on students who were in school for the full time of the treatment. The research project's co-directors completed analysis of covariance of pre- and post-test scores from ECLAS, MCLAS, and Teacher's College Reading Assessments. For independent reading levels, the researchers employed a Chi Square for School 3 and School 4 subjects. Schools 3 and 4 data were the only schools analyzed in such a manner because they were the only schools in which independent reading levels assessments were given.

Five constructs were measured. The first was the *Letter Recognition* construct, which was derived by assessing students' abilities to name letters of the alphabet, and items to assess capital and lower case letters, consonant blends, vowels and beginning and ending letter patterns.

The second construct focused upon *Rhyme Recognition and Generation*. This construct was derived from items which measured initial, medial and ending sounds, frequently occurring phonic sounds, and items designed to assess students' abilities to identify and use initial, medial, and ending letter sounds.

Vocabulary development was the third construct, and for purposes of data analysis, it was derived by combining items that measured students' word identification and comprehension of these words. Students were assessed on their abilities to read frequently occurring English words.

The fourth construct, *Independent Reading Level (IRL)* was based upon a student's ability to orally read a passage from the DIBELS assessment. The number of words read correctly and self-correction percentage scores made by the students obtained during the reading of the passage as well as their comprehension of what was read formed the basis of this measurement. Students' scores ranged from 1 (below grade level) to 4 (above grade level). This construct measured students' abilities to read continuous text in the form of sentences and paragraphs.

Listening Comprehension constituted the fifth and final construct of this research investigation. It was derived by adding scores obtained on questions that assessed students' abilities to recall facts read in the sentences and paragraphs cited above.

Once these five constructs were developed, then ANCOVAs were conducted. The first set of ANCOVAs analyzed all constructs by class type (control, treatment). The second set of two-way ANCOVAs analyzed all constructs by class type (control, treatment) and gender (male, female). The third set of two-way ANCOVAs analyzed all constructs by class type (control, treatment) and ELL status (non-ELL, ELL). In addition to testing for statistical significance of mean group differences, standardized mean differences were calculated using Cohen's *d* (Cohen, 1988). IRL (Independent Reading Level) was analysed through Chi Square.

Results

At the inception of this research investigation, three hypotheses were made. They were:

1. Will the AWARD Reading Program deliver significantly higher outcomes for students who are enrolled in Title I, low socio-economic urban schools than for those students in the same school who learn through traditional basal reading programs?;
 2. Will English Language Learners (ELL) in the same schools as stated in Hypothesis 1 advance more rapidly in learning to read English through the AWARD Reading Program than their counterparts who are instructed through the use of push-in, pull-out, after-school, during school hours, or remedial programs in which traditional ELL reading programs are used?;
- and,

3. If AWARD Reading does significantly increase literacy achievement for low socio-economic, Title I students and/or ELL populations, is there a method of using this program that is more conducive to attaining high literacy achievement on the part of either or both of these populations? Is a pull-in, push-out, regular classroom use, or after-school application of AWARD Reading most successful for students who do and do not struggle as beginning readers?

For Research Question # 1 above, data was procured in answer to this question based upon the five constructions identified previously on page 13 of this research document. These analyses revealed the following significant data relative to this question: Will the AWARD Reading Program deliver significantly higher outcomes for students who are enrolled in Title I, low socio-economic urban schools than for those students in the same school who learn through traditional basal reading programs? Yes, it did.

The researchers based the preceding finding as a result of data derived from a Univariate Analysis of Covariance between experimental and control subjects. On the first construct, *Letter Recognition*, no significant differences were found between the experimental and control group students. It should be noted that this result was not negative. Control and experimental group students demonstrated mastery with both groups scoring means of 50 (out of a possible 52 items correct) in this measure of capital and lower case letter knowledge.

For the second construct, *Rhyme Recognition and Generation*, experimental subjects ($M=4.45$, $SD=1.56$) significantly outperformed control subjects ($M=2.18$, $SD=.60$) on their ability to generate rhyming words as measured by the MCLAS/ECLAS test of Rhyming Generation [$F=34.418$, $df=1$, $p<.0001$, $d=1.91$]. This Cohen d effect size is extremely large in that most intervention typically falls within the .01 - .25 range. Any effect size that is within the .7 to 1.0 range is deemed to be large and thus the 1.91 effect size of the AWARD Program is especially large.

In the third construct, *Vocabulary Development*, experimental subjects ($M=2.03$, $SD=.94$) significantly outperformed control subjects ($M=1.19$, $SD=.40$) on the MCLAS/ECLAS subtests, [$F=23.017$, $df=1$, $p<.0001$, $d=1.38$]. As noted above, an effect size between .7 to 1.0 is considered to be large. Once again, the usage of AWARD Reading produced results much larger than is customary in such research investigations.

The fourth construct in response to Research Question # 1 was *Independent Reading Level*. Through usage of the Chi Square statistic of DIBELS Benchmark Interval data relative to this construct was procured. These data were interpreted as: 1=below grade level performance (1st-25th percentile ranking), 2=slightly on grade level (26th-50th percentile ranking), 3=on grade level (51st-75th percentile ranking), and, 4=above grade level (76th-99th percentile ranking).

As noted earlier, data relative to this construct was only available for Schools 3 and 4. In School 3, experimental subjects significantly outperformed control subjects [Chi Square= 437.363, df = 2, $p < .0001$], as well as in School 4 [Chi Square= 470.394, df=2, $p < .0001$]. Differences between these means were not only statistically significant, but once again due to the exceptionally large effect size between the two groups, this difference was of great educational significance. The mean independent reading ability level of control subjects was $M = 1.19$, $SD = .40$, while the experimental subjects scored over twice as high in this construct, with a mean reading ability level of 3.48, $SD = 9.0$. Thus, the majority of control subjects ended one full year of traditional reading instruction reading at approximately the 20th percentile level, which is below grade level expectations. On the other hand, after a year of AWARD Reading instruction, experimental subjects ended the year at approximately the 75th percentile, which is on or slightly above grade level. For schools with high concentrations of urban and ELL students, these results are noteworthy.

On the fifth and final construct of Research Question # 1, post tests of *Listening Comprehension*, the experimental group ($M=2.63$, $SD=.49$) significantly outperformed control subjects ($M=1.23$, $SD=.59$) [$F=19.34$, $df=1$, $p < .0001$, $d=1.80$]. Again, the experimental subjects scored over twice as high in this construct as comparable students who were members of the control group did.

For Research Question # 2 above, data was procured in answer to this question based upon the five constructs identified previously on page 13 of this research document. These analyses revealed the following significant data relative to this question: Will English Language Learners (ELL) in the same schools as stated in Hypothesis 1 advance more rapidly in learning to read English through the AWARD Reading Program than their counterparts who are instructed through the use of push-in, pull-out, after-school, during school hours, or remedial programs in which traditional ELL reading programs are used?. Yes, they did.

While significant differences were not found between control and experimental group students relative to the constructs of *Letter Recognition*, *Vocabulary Development*, and *Independent Reading Level*,

they were found for the constructs of *Rhyme Recognition and Generation* as well as *Listening Comprehension*. Data for these two constructs are presented below.

When ELL control and experimental subjects were compared, the researchers found that experimental subjects ($M=4.17$, $SD=1.80$) significantly outperformed control subjects on construct 2 (*Rhyme Recognition and Generation*) ($M=2.0$, $SD=2.0$) [$F=7.26$, $df=1$, $p=.023$]. On the test of *Listening Comprehension*, experimental subjects ($M=2.72$, $SD=.46$) significantly outperformed control ($M=1.0$, $SD=1.0$) [$F=4.978$, $df=1$, $p=.04$]. In these respective areas, the data show that experimental ELLs had scores over twice as large as their control group counterparts.

For Research Question # 3 above, data was procured in answer to this question based upon the five constructs identified previously on page 13 of this research document. This analysis revealed the following significant data relative to this question: If AWARD Reading does significantly increase literacy achievement for low socio-economic, Title I students and/or ELL populations, is there a method of using this program that is more conducive to attaining high literacy achievement on the part of either or both of these populations? Is a pull-in, push-out, regular classroom use, or after-school application of AWARD Reading most successful for students who do and do not struggle as beginning readers? No, it did not.

An analysis of the data was informative in that it showed the instructional mode through which the AWARD Reading Program was delivered did not lessen its effectiveness when used with students. No significant differences were found in the classrooms that utilized the program as a pull-in, push-out, supplemental literacy program, or in an after-school program. AWARD Reading was highly effective when used in all these ways.

Limitations

This study was based on a representative sample of students enrolled in the New York City Schools. Data can be validly extrapolated beyond this cultural, social, and historical context in that these students represented a cross-section of urban, ethnic groups, and races. These data cannot be extrapolated for suburban, rural, gifted, or high socio-economic students.

The data in the study was based on a one-year intervention period. The effects of extending the usage of the AWARD Reading Program for a longer period of time were not examined.

Due to regulations established by the New York City Department of Education, assessments for control as well as experimental subjects at the start and finish of the study were limited to those measures already being utilized by the schools in this research investigation.

Conclusions

What have we learned from this study? The results derived from this research investigation can make a major contribution to the body of literacy knowledge in at least five important ways. First, prior to this study many USA classrooms followed a hierarchical presentation of material beginning with the alphabet, single letter sounds, two letter words, single sentences, two sentences, comprehension skills, fluency, and paid relatively little attention to the development of basic concepts and vocabulary terms which are essential for beginning readers, struggling readers, and limited English speakers. The AWARD program infuses all dimensions of reading ability simultaneously in a highly engaging interactive technological format. Students learn single sounds at the same time as they are: learning words, learning to comprehend passages while they write words using passages, and developing concepts through actual pictures with which they interact through technology before they have to read text connected with these pictures.

Second, this research investigation clearly shows that a commercial program (AWARD Reading) can be developed which infuses technology with literacy instruction in a manner that produces high levels of student achievement. While the attitudes toward reading of the children in this research investigation were not measured, with the high levels of achievement realized by the students who were taught via AWARD Reading, it is reasonable to assume they concurrently developed a positive attitude toward reading. This finding is important in that the usage of AWARD Reading can, for most students, reduce the multi-decade trend of numerous students possessing negative attitudes toward reading. This research has demonstrated that a program doesn't have to be fun or effective, but rather can do both simultaneously. Such results occurred for all subjects in this study regardless of their ethnicity, entering reading level, or gender. This research investigation clearly showed that students with minority culture experiences, especially ELLs, will perform well when they have the opportunity to learn basic reading concepts through AWARD Reading.

Third, in the 21st century in which this new younger generation will be living, it is important that from the earliest stages of reading they learn the skills of interacting successfully with technology

and print in an integrated fashion. Literacy programs that match the state standards that *Reading First* demands and the *No Child Left Behind* legislation, and produce high levels of reading achievement are rare. This study demonstrates that the AWARD program not only met these challenges but also significantly outperformed traditional modes of literacy instruction. AWARD Reading provided a program that motivated these tech-savvy students and produced high levels of achievement results.

Fourth, in the current environment of educational accountability and public scrutiny, the public is demanding high levels of student achievement in all aspects of schooling and especially in literacy. At the inception of this investigation, answers to three research hypotheses were sought. In Appendices A, B, and C (at the conclusion of this research report), these questions are restated and data relative to each of them are summarized.

The success of AWARD Reading in producing high levels of student achievement is exemplary. In an analysis of the constructs which constituted Research Questions # 1 and # 2, students receiving literacy instruction through AWARD Reading significantly outperformed students at their school who received literacy instruction in a different manner. Also, in six of these instances, AWARD Reading produced student gains that were over twice as large as their control group counterparts.

Finally, in the analysis of Research Question # 3, AWARD Reading demonstrated that it is not only a program that produces high levels of reading achievement but also one that can be used for multi-purposes within an elementary school. In this research investigation, AWARD Reading was utilized as a: push-in, pull-out, after-school, during school hours, or remedial program, and the instructional mode through which it was delivered did not lessen its effectiveness. AWARD Reading produced high achievement regardless of its mode of usage in a school setting.

Implications for Future Literacy Instruction

There is a need for additional studies for the effects of specific reading practices upon student achievement. While many could be suggested, there are three areas that seem to be natural emanations from this research investigation. First, AWARD Reading has proven that it produces high achievement with students in early elementary grades. Will the use of its framework and contents produce comparable results in Grade 4-8? Second, for years literacy experts have written as to the relationship among the language arts, therefore, it is natural to assume that with such a high

level of achievement in the area of reading, that there would be a concurrent high level of performance of students in writing when AWARD Reading is used. This is clearly an area that should be examined further. Finally, research has shown that many struggling readers are tactile learners. AWARD Reading has demonstrated its success with all types of learners in kindergarten through second grade. Will the use of this program via a tactile mode produce comparable results for struggling readers, who are in upper elementary grades, but who read at the reading levels represented by this program?

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APPENDIX A

Summary of Research Question # 1

Research Question # 1: Will the AWARD Reading Program deliver outcomes for students who are enrolled in Title I, low socio-economic urban schools who are significantly above those students in the same school who learn through traditional basal reading programs?

- *Letter Recognition*--No significant differences were found between the experimental and control groups.
- *Rhyme Recognition and Generation*--Experimental subjects significantly outperformed control subjects. Using Cohen's *d* effect size criteria, the effect size between the two groups is especially large.
- *Vocabulary Development*--Experimental subjects significantly outperformed control subjects. Once again, the difference (using Cohen's criteria) was quite large.
- *Independent Reading Level*--Experimental subjects significantly outperformed control subjects. Differences between these two means were not only statistically significant, but due to the exceptionally large effect size between the two groups, this difference was of great educational significance. The majority of control subjects ended one full year of traditional reading instruction reading at approximately the 20th percentile level, which is below grade level expectations. On the other hand, after a year of AWARD Reading instruction, experimental subjects ended the year at approximately the 75th percentile, which is on or slightly above grade level.
- *Listening Comprehension*--The experimental group significantly outperformed the control group. As was also the case for the *Rhyme Recognition and Generation* and *Vocabulary Development* constructs, the experimental subjects scored over twice as high in this domain as comparable control group subjects did.

APPENDIX B

Summary of Research Question # 2

Research Question # 2: Will English Language Learners (ELLs) in the same schools as stated in Hypothesis 1 advance more rapidly in learning to read English through the AWARD Reading

Program than their counterparts who are instructed through the use of push-in, pull-out, after-school, during school hours, or remedial programs in which traditional ELL reading programs are used?

- *Letter Recognition*--No significant differences were found between the experimental and control groups.
- *Rhyme Recognition and Generation*--Experimental subjects significantly outperformed control subjects. Experimental ELLs had scores over twice as large (using Cohen's criteria) as their control group counterparts.
- *Vocabulary Development*--No significant differences were found between the experimental and control groups.
- *Independent Reading Level*-- No significant differences were found between the experimental and control groups.
- *Listening Comprehension*-- Experimental subjects significantly outperformed control subjects. Experimental ELLs had scores over twice as large (using Cohen's criteria) as their control group counterparts.

APPENDIX C

Summary of Research Question # 3

Research Question # 3: If AWARD Reading does significantly increase literacy achievement for low socio-economic, Title I students and/or ELL populations, is there a method of using this program that is more conducive to attaining high literacy achievement on the part of either or both of these populations? Is a pull-in, push-out, regular classroom use, or after-school application of AWARD Reading most successful for students who do and do not struggle as beginning readers?

- The instructional mode through which the AWARD Reading Program was delivered did not lessen its effectiveness when used with students. AWARD Reading produced high achievement regardless of its mode of usage in a school setting.